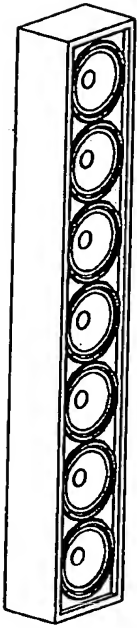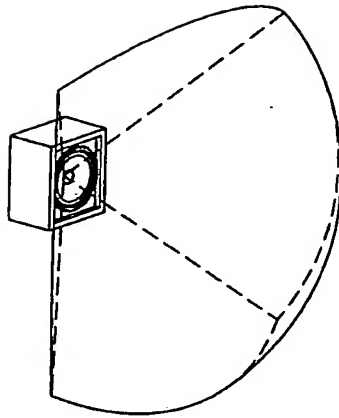Fig. 1A - Vertical
sound line

Fig. 1B - Spherical
sound line

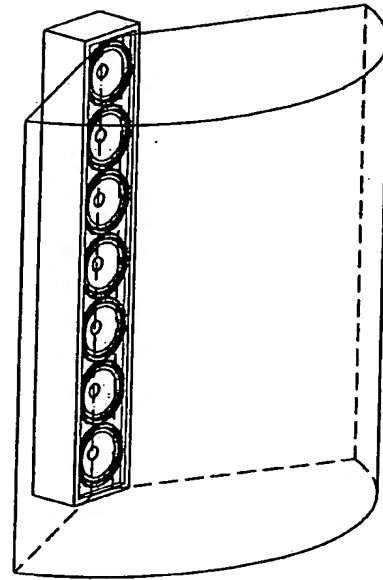Fig. 1C - Cylindrical
sound line
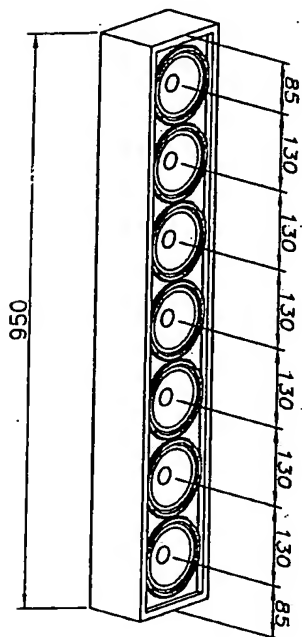
Fig. 2A – Dimensional
example of vertical
sound line

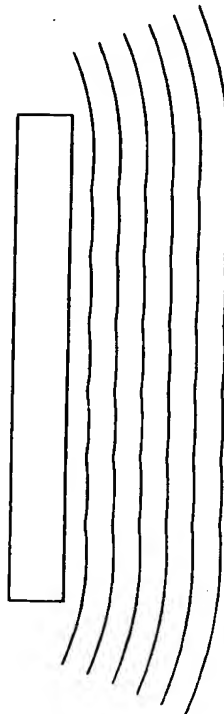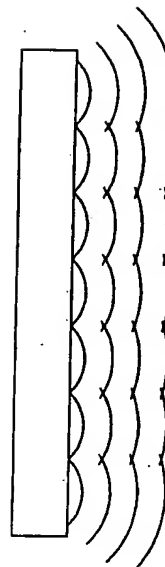Fig. 2B – 1000 Hz

Fig.2C – 2000 Hz
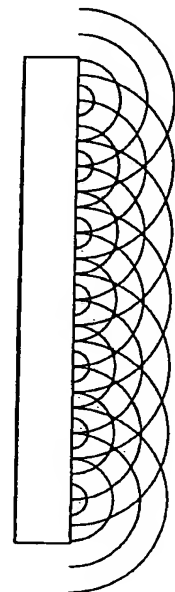
Fig. 2D - Over
2000 Hz
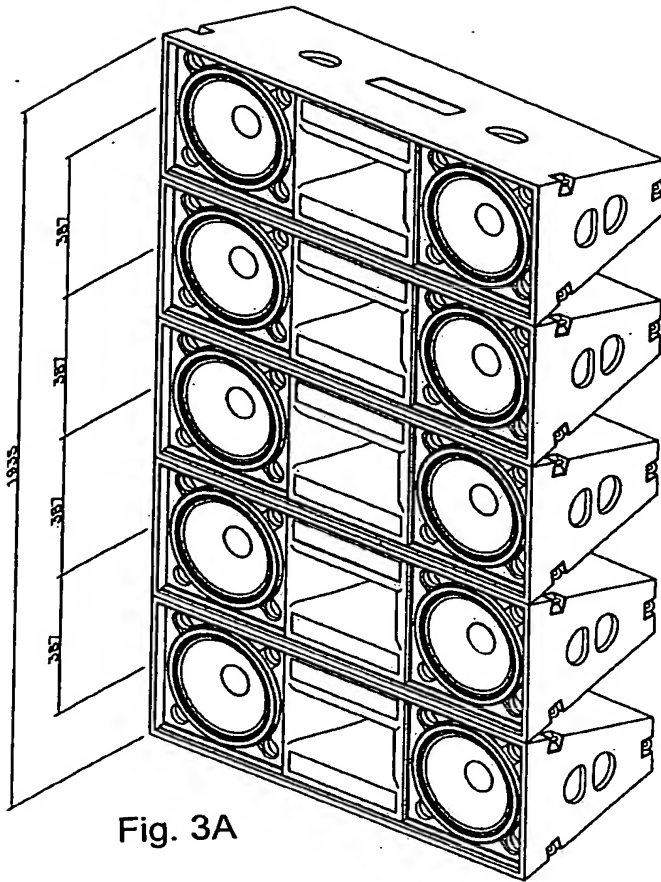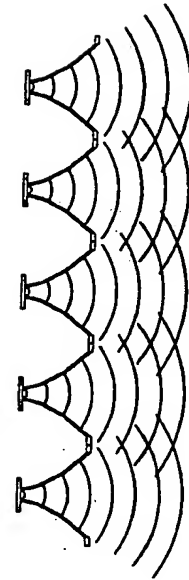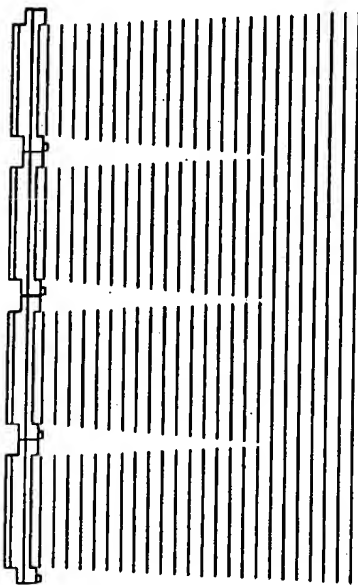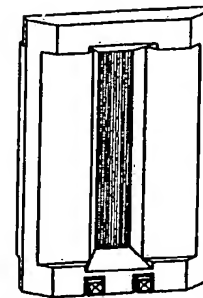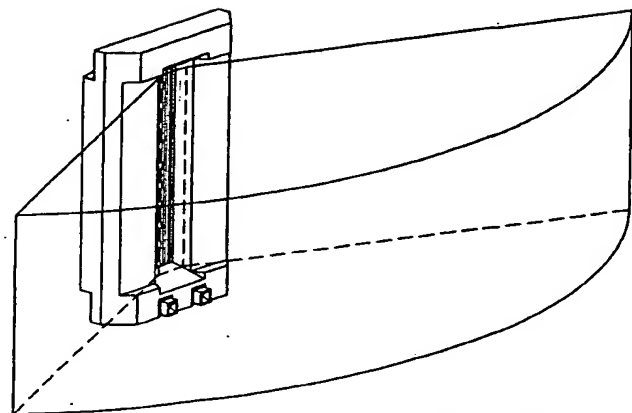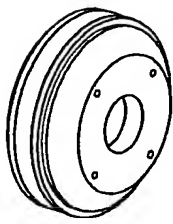
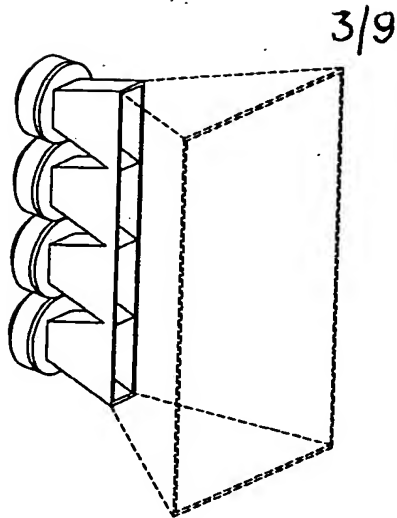Fig. 3A

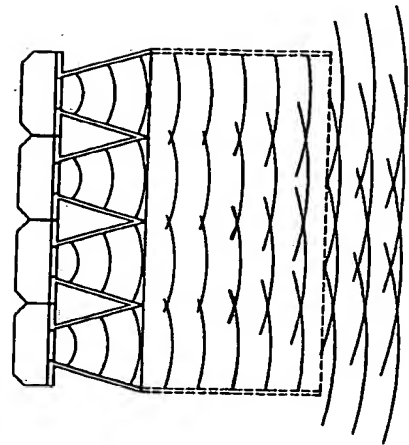

Fig. 3B
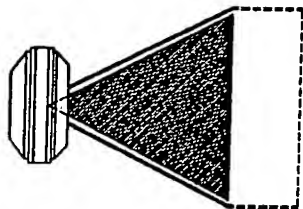

Fig. 4B

Fig. 4A

Fig. 4C

Fig. 5A

Fig. 5B

Fig. 5C

Fig. 6A -Horizontal
cross section
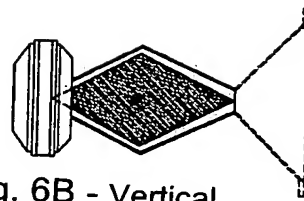
Fig. 6B - Vertical
cross section

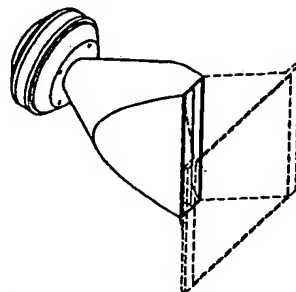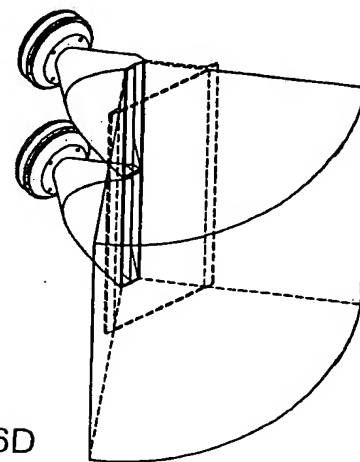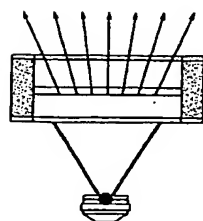Fig. 6C

Fig. 6D

Fig. 7D - Reflection pattern on a hiperbolic surface – from above and cross section

Fig. 8C- Wave guide pattern with real (above) and theoretical (below) elliptical reflection surface

Fig. 7C - Reflection pattern on a parabolic surface after the second throat plane - from above and cross section

Fig. 8B - Wave guide pattern with real (above) and theoretical (below) hiperbolic reflection surface

Fig. 7B - Reflection pattern on a parabolic surface before the first throat plane - from above and cross section

Fig. 8A - Wave guide pattern with real (above) and theoretical (below) parabolic reflection surface

Fig. 7A - Reflection pattern on a flat surface - from above and cross section

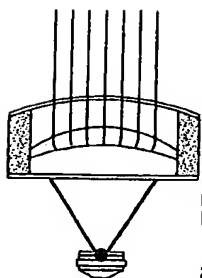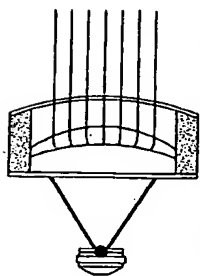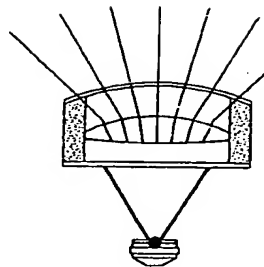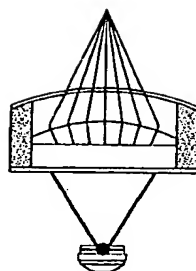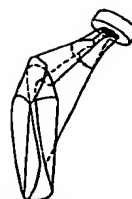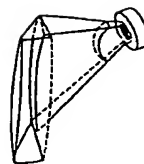Fig. 7E - Reflection pattern on an elliptical surface – from above and cross section
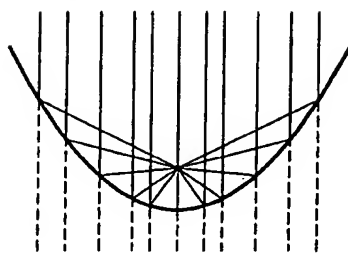
Fig. 9A3 - Effect of a real source on a segment

Fig. 9B3 - Effect of a real source on a segment

Fig. 9C3 - Effect of a real source on a segment
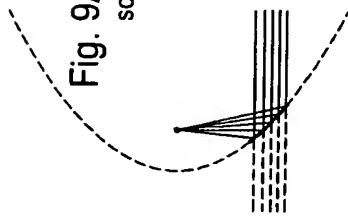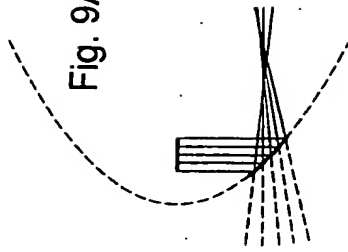
Fig. 9A2 - Effect of a point source on a segment
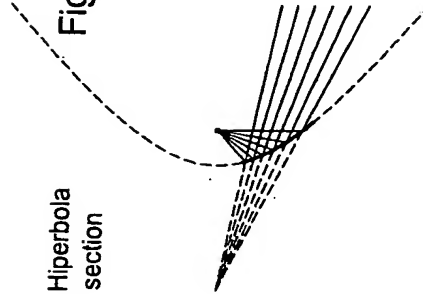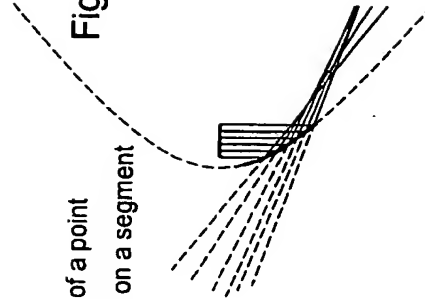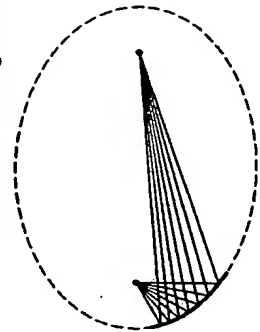
Fig. 9B2- Effect of a point source on a segment

Fig. 9C2 - Effect of a point source on a segment

Fig. 9A1- Parabola section
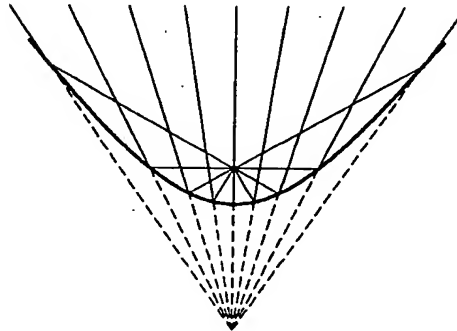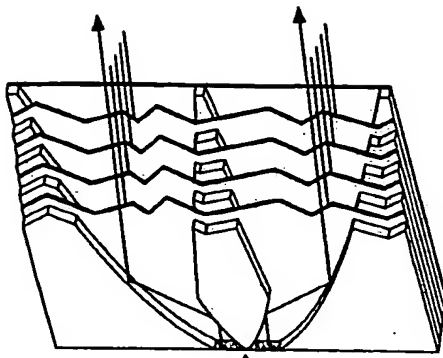
Fig. 9B1 - Hiperbola section
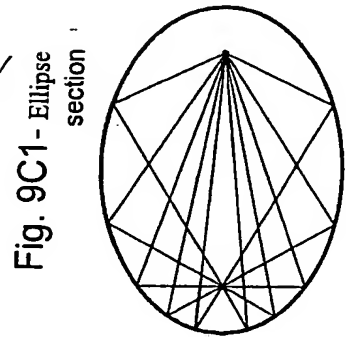
Fig. 9C1 - Ellipse section

Fig. 10E

Point of arrival of
any acoustic path

Elliptical (concave)
reflection surface

24

21

22

23

Fig. 10B

Flat reflection surface

24

21

22

23

Fig. 10D

Parabolic (concave)
reflection surface

24

21

22

23

Fig. 10A

Focus F of the parabola
= "real" point source

Real flat souce

Parabolic (convex)
reflection surface

23

22

21

Fig. 10C

Hyperbolic (concave)
Reflection surface

24

21

22

23
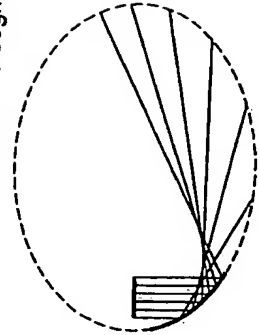
Partition for eliminating inside reflections

22

Fig. 11C

Reflection surface

24

Fig. 11B

Emission plane

22

21

22

Emission plane

24

Reflection surface

21

Fig.11A

25

Parabolic reflection surface

Flat reflection surface

24

Fig. 12

21

22

23

21

Reflection surface obtained by revolution

22

Emission plane

Fig. 11D

Fig. 13A

13C 13 13D

13F

13E

13B

Fig. 14B

13

13B

13B 13

Fig. 14A

Fig. 15C

Fig. 15B

Fig. 15A